

REMARKS

Claims 1-19 are pending in this application. Claims 1, 9, 13, 17, 18 and 19 are independent claims. By this amendment, claims 1, 9, 13, 17, 18 and 19 are amended. Reconsideration in view of the above amendments and following remarks is respectfully solicited.

Applicant respectfully requests entry of the present Amendment After Final in that the amendments to the claims do not raise any new issues that would require further consideration and/or search. For example, the amendments to the independent claims merely amplify issues previously presented throughout prosecution. Accordingly, entry of the claim amendments and allowance of each of claims 1-19 is earnestly solicited in connection with the present application.

The Examiner expressly states that he agrees that the invention disclosed by the cited art Van de Poel is different from and directed to solving a different problem than the present application. (see page 3 of final Office Action). Therefore, in order to expedite prosecution of the present case, independent claims 1, 9, 13, 17, 18 and 19 are amended to amplify the Examiner's point.

Allowable Subject Matter

The final Office Action indicates that claims 3, 4, 6, 7, 10, 11, 14 and 15 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, applicant respectfully submits that

all of claims 1-19 are allowable, for at least the reasons set forth below.

The Claims Define Patentable Subject Matter

The final Office Action rejects claims 1, 2, 5, 8, 9, 12, 13 and 16-19 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,061,091 to Van de Poel et al. (hereafter Van de Poel). This rejection is respectfully traversed.

Applicant respectfully submits that Van de Poel fails to teach or suggest each and every feature as set forth in the claimed invention. For example, Van de Poel at least fails to teach or suggest *automatically* making an adjustment to either the pixel value or an exposure value at the time of photographing or a data transformation process based on a determined rate of pixels. In the present invention, the determined rate is based on a number of pixels having a maximum brightness among all pixels, wherein the maximum brightness among all pixels is taken from a group of commonly encountered brightness, as set forth in respective independent claims 1, 9, 13, 17, 18 and 19.

Claims 1, 9 and 13 recite, *inter alia*, expressing a pixel value of each pixel in the image data as a set of three mutually independent components. The brightness of each pixel is defined based on the three components. A rate of pixels is determined based on a number of pixels having a maximum brightness among all pixels, wherein the maximum brightness among all pixels is taken from a group of commonly encountered brightness. Automatic adjustments are made based on this determined rate. Claims 17, 18 and 19 recite similar features.

In addition, claims 9, 13, 18 and 19 recite that a histogram of brightness is computed based on the three components or based on chrominance.

The brightness adjustment method/apparatus of the present invention is capable of automatically adjusting brightness, not based on a mean value but based only on the number (frequency) of pixels having the maximum brightness. In other words, regarding the brightness of the image, the brightness is determined by the frequency of a highlighted portion rather than by the mean value of the entire image. As such, the rate of pixels having the maximum brightness among all pixels is made a predetermined ratio. The maximum brightness among all pixels is taken from a group of commonly encountered brightness.

In contrast to the present invention, Van de Poel merely discloses image processing parameters for gradation correction of a digital image which includes specular reflections. The specular reflections in Van de Poel are defined as very bright spots that may be up to eight times higher than the brightest surface in the scene. (see Van de Poel, col. 1, lines 21-26). As such, Van de Poel is mainly concerned with detecting the presence of specular reflections (extreme bright spots), having the operator modify the exposure time, and applying a gradation correction to the image, instead of adjusting the brightness of an image as done in the present invention.

The Examiner asserts that Van de Poel's rate of pixels containing spectral reflections is defined by a cumulative density of pixels falling in a range of X1 and X2 as shown in Van de Poel's Fig. 3. From this assertion, the Examiner arrives at the allegation

that Van de Poel does determine a rate of pixels having a maximum brightness. (see final Office Action, page 3). However, applicant respectfully submits that this alleged rate of pixels of Van de Poel is clearly distinguishable from the claimed rate of pixels. For example, the claimed rate of pixels is based on a number of pixels having a maximum brightness among all pixels, wherein the maximum brightness among all pixels is taken from a group of commonly encountered brightness. In contrast to the present invention, Van de Poel's alleged rate of pixels is based on specular reflections (extreme bright spots) within a particular range X_1 and X_2 , not on a maximum brightness among all pixels from a group of commonly encountered brightness. Van de Poel is only concerned with detecting extreme bright spots caused by reflection of studio lamps. Van de Poel is not at all concerned with adjusting the brightness in an image based on a determined rate of pixels having a maximum brightness, as set forth in the claimed invention.

Furthermore, the Examiner has directed applicant's attention to Fig. 3 of Van de Poel in order to show a cumulative histogram plotting the density frequency and is trying to equate Van de Poel's density histogram to the claimed histogram of brightness. However, applicant respectfully submits that Van de Poel's density histogram is distinguishable from the claimed histogram of brightness. For example, Van de Poel's density histogram as depicted in Fig. 3 is merely a cumulative frequency of occurrence Y concerning the density X . (see Van de Poel, col. 9, lines 46-60). Thus, Van de Poel's Fig. 3 is not a brightness histogram, as wrongly categorized by the Examiner. Secondly, Van de Poel Fig. 3

only shows a one color channel histogram. (see Van de Poel, col. 13, lines 34-42). Whereas in the claimed invention, the brightness histogram is computed based on three mutually independent components, as set forth in claims 9 and 13, and based on a chrominance value as set forth in claims 18 and 19.

Furthermore, Van de Poel uses a maximum density value X_{MAX} rather than a maximum brightness value as set forth in the claimed invention. Specifically, Van de Poel uses a specular density X_1 , a highlight density X_2 and a maximum density X_{MAX} to compute a gradation correction curve. Applicant respectfully submits that Van de Poel's gradation correction system is thus completely different and distinguishable from the brightness correction methods/apparatus of the present application.

Furthermore, the only adjustments made by Van de Poel includes the photographer himself adjusting the exposure time of the camera based on the one color channel density histogram. No automatic adjustment to the pixel values based on the determined rate is done in Van de Poel.

According to MPEP §2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claims." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989). The elements must be arranged as required by the claims, but this is not an *ipsissimis*

verbis test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicant respectfully submits that the final Office Action has failed to establish the required *prima facie* case of anticipation because the cited reference, Van de Poel, fails to teach or suggest each and every feature as set forth in the claimed invention.

Applicant respectfully submits that independent claims 1, 9, 13 and 17-19 are allowable over Van de Poel for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1, 2, 5, 8, 9, 12, 13 and 16-19 under 35 U.S.C. §102(e) is respectfully solicited.

Conclusion

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

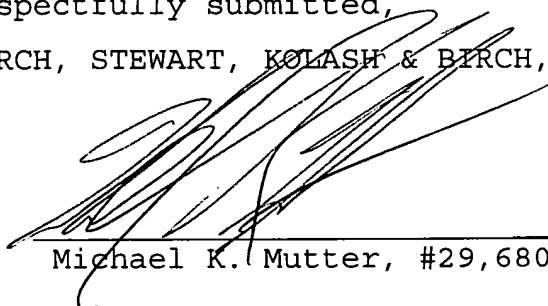
Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 to schedule a Personal Interview.

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Reply to Office Action of September 3, 2003

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

Respectfully submitted,
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